

In the Abstract:

Please replace the abstract presently on file by the following:

A method of optimizing parameter values in a process for producing a product, which process is essentially controlled by a set of parameters affecting a set of properties characterizing the product. The method uses an analytic hierarchy process (AHP) to associate a weight with each property according to its relative importance to obtain desired product characteristics. The method also uses parameter data and measured property data from a required number of experimental runs of the process, from which data property behavior relations between each property and the parameters are statistically established, which relations give estimated property values. Using the property weights, a process goal function is established, which is expressed in terms of weighted deviations between the estimated property values and the corresponding goal values for the properties. Finally, the process goal function is minimized in order to generate a set of optimal parameter values for the process.